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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,474	06/06/2001	Raul E. Sequeira	CE08236R	7955
22917 7590 03/09/2007 MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			EXAMINER ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2611	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/09/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com
APT099@motorola.com

Office Action Summary

Application No.

09/875,474

Applicant(s)

SEQUEIRA, RAUL E.

Examiner

Curtis B. Odom

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5, 6, 10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 and 13 is/are allowed.
- 6) ☒ Claim(s) 5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 5, 6, 10, and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Herzog (U. S. Patent No. 6, 473, 417).

Regarding claim 5, Herzog discloses a method of interference cancellation in a multiple access communication channel comprising:

receiving (see column 3, lines 56-62) a signal including at least a first data component (traffic channel signal) for a first channel within the multiple access communication channel and a second data component (co-channel interference, see also column 1, lines 16-25) for a second channel within the multiple access communication channel on the communication channel;

determining log-likelihood metrics (see column 4, lines 28-35) of one stage of the multiple access communication channel;

estimating an interference signal (see column 4, line 65-column 5, line 5) caused by the co-channel interference based on the approximation of the metrics (see also column 1, line 64-column 2, line 15) and comprising applying a piece-wise linear estimation of the hyperbolic tangent (see column 4, lines 39-45) to the metrics;

using the interference signal to cancel the co-channel interference from the signal (see column 1, line 64-column 2, line 15); and

recovering the traffic data component from the signal by decoding (see column 2, lines 1-4).

4. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Hottinen (U. S. Patent No. 6, 904, 109).

Regarding claim 6, Hottinen discloses a method of interference cancellation in a multiple access communication channel comprising:

receiving (see column 4, lines 23-32) a signal including at least a first data component (desired signal, see also column 5, lines 37-41) for a first channel within the multiple access communication channel and a second data component (interfering signals) for a second channel wherein there are multiple channels which produce interfering signals within the multiple access communication channel on the communication channel as described in column 1, lines 36-50);

determining an estimated symbol (see column 4, lines 36-51) of one stage of the multiple access communication channel;

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estimating weighted interference signals (see column 5, lines 36-52) caused by the interfering channels based on the approximation of the estimated symbols, wherein a piece-wise linear estimation of a probability of error function is applied to the estimated symbols (see column 4, lines 36-51) to determine the confidence coefficient used to determine the estimated weighted interference signals as described in column 5, lines 36-52;

using the interference signals to cancel the interference from the signal (see column 5, lines 37-41); and

recovering the desired signal (see column 6, lines 55-57).

Allowable Subject Matter

5. Claims 10 and 13 are allowable over prior art references because related references do not disclose applying a probability of error or hyperbolic tangent to a signal-to-noise ratio to determine an interference factor or interference coefficient in a multiple access communication channel.

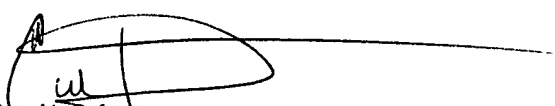
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

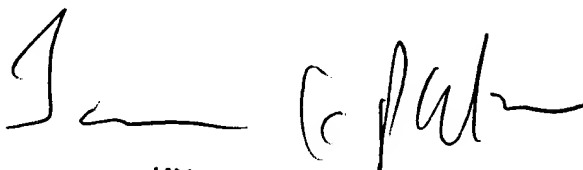
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Curtis Odom
March 4, 2007



JAY K. PATEL
SUPERVISORY PATENT EXAMINER